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EXAMINER
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SAIN, GAUTAM

ART UNIT	PAPER NUMBER
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2176

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/839,176

Applicant(s)

BENNETT ET AL.

Examiner

Gautam Sain

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16, 26-29, 35-48, 54-57 and 63-65 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16, 26-29, 35-48, 54-57, 63-65 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/03</u> . | 6) <input type="checkbox"/> Other: _____  |

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## DETAILED ACTION

### *Election/Restrictions*

1. Upon provisional election without traverse by Applicant on September 1, 2004, this office action examines claims 1-16, 26-29, 35-48, 52, 54-57, and 63-65.

### ***Claim Rejections - 35 USC § 102***

2) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**2-1) Claims 26-29 are rejected under 35 U.S.C. 102(e) as being anticipate by Belfiore et al (US 2002/0059425, provisional application 60/213562, filed Jun 22, 2000) .**

**Claim 26.** Balfiore teaches

*storing for a client content including unstructured text (ie., base types including text)(para 72);*

*generating a form in a data representation language including data extracted from the content (ie., creating ad hoc templates ... Template generation)(para 113); and transmitting to the client a notification including the form (ie., event notification service that passes messages to device)(para 18).*

**Claim 27,** Balfiore teaches

*populating fields of at least one stored template (ie., fill in address field of a template)(para 50).*

**Claim 28**, Balfiore teaches

*sending an instruction to prompt a user to cause the client to perform an operation on data in at least one field of the template (ie., data stored in schema, upon user properly authentication, user can update information in the schema)(para 19).*

**Claim 29**, Balfiore teaches

*sending an instruction to invoke a process associated with an application executed on the device to perform an operation on data in at least one field of the template (ie., server sends event notification for schema update services)(para 18, 19).*

### ***Claim Rejections - 35 USC § 103***

2) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**2-1) Claims 1, 2, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 35, 36, 38, 39, 40, 41, 43, 44, 45, 46, 47, 48, 54, 55, 56, 67, 63, 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belfiore et al (as cited above), in view of Non Patent Literature "REES: A Large-Scale Relation and Event Extraction System," Proceedings of the Sixth Natural Language Processing Conference (ANLP-2000) by Chinatsu Aone**

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**and Mila Ramos-Santacruz (hereinafter "Aone") (effective date May 4, 2000, see Applied Natural Language Processing 2000 document for date).**

**Claim 1, 63, 65, Belfiore teaches**

*receiving at the server content addressed to a particular device (address of web page requested by user to destination that is processed through the server)(paragraph 7); generating a form containing data extracted from the content (ie., creating ad hoc templates ... Template generation)(para 113) and making available to the particular device a notification of the event (ie., event notification service that passes messages to device)(para 18).*

Belfiore does not teach, but Aone teaches

*typing at least one event reflected by the content (ie., event extraction system, fig 2 shows ATTACK target event template for a sentence)(section 1).*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Belfiore to include an event extraction system that generates a template for events as taught by Aone, providing the benefit of Natural Language Processing for large-scale relation and event extraction system (Aone, Title, Abstract) and data structure that follow a schema in which the meaning of the communication for intelligent decisions and inferences made on the based on the meaning of the data (Belfiore, Abstract section).

**Claim 2, Belfiore does not expressly teach, but Aone teaches**

*extracting data from the content, the extracted data including a set of data elements (ie., Fig 2 shows example of event template for a sentence);*

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*filling fields of a set of templates with the data elements by matching fields to the data elements according to a determined type for each data element (ie., fig 2 shows matching the sentences with the data types WEAPON – missiles), and identifying the event based on the filled fields of the templates (ie., fig 2 shows event in sentence is identified as Type: conflict).*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Belfiore to include events as templates for natural sentences where a type is matched to the sentence and identifies the type of the event as taught by Aone, providing the benefit of Natural Language Processing for large-scale relation and event extraction system (Aone, Title, Abstract) and data structure that follow a schema in which the meaning of the communication for intelligent decisions and inferences made on the based on the meaning of the data (Belfiore, Abstract section).

**Claim 4, Belfiore teaches**

*Receiving at the central controller content including unstructured text addressed to a particular device (address of web page requested by user to destination that is processed through the server)(paragraph 7);*

*generating a form containing data extracted from the unstructured text (ie., creating ad hoc templates ... Template generation)(para 113) ; and*

*making available to the padicular device a notification of the event (ie., event notification service that passes messages to device)(para 18);*

Belfiore does not expressly teach, but Aone teaches

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*typing at least one event reflected by the unstructured text* (ie., fig 2 shows event in sentence is identified as Type: conflict).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Belfiore to include events as templates for natural sentences where a type is matched to the sentence and identifies the type of the event as taught by Aone, providing the benefit of Natural Language Processing for large-scale relation and event extraction system (Aone, Title, Abstract) and data structure that follow a schema in which the meaning of the communication for intelligent decisions and inferences made on the based on the meaning of the data (Belfiore, Abstract section).

**Claim 5**, Belfiore does not expressly teach, but Aone teaches

*identifying the event in the unstructured text* (ie., fig 2 shows event in sentence is identified as Type: conflict); and

*identifying an event type for the event based on stored information reflecting event types* (ie., REES extracts and identifies the 61 types of events from event ontology)(sec 1.2; fig 1, Table 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Belfiore to include events that are identified in sentences as a type where the system extracts and identifies the types of events from the event ontology as taught by Aone, providing the benefit of Natural Language Processing for large-scale relation and event extraction system (Aone, Title, Abstract) and data structure that follow a schema in which the meaning of the communication for intelligent decisions and inferences made on the based on the meaning of the data (Belfiore, Abstract section).

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**Claim 6**, Belfiore does not expressly teach, but Aone teaches

*selecting a form type from a set of forms based on the type of event (ie., the Person-Affiliation relation template is chosen based on encryption)(section 1, fig 1); and populating fields of a blank form of the selected form type with the data from the unstructured text (ie., template fields are populated for the event)(fig 1, 2).*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Belfiore to include relationships based on types identified and populating template fields for an event as taught by Aone, providing the benefit of Natural Language Processing for large-scale relation and event extraction system (Aone, Title, Abstract) and data structure that follow a schema in which the meaning of the communication for intelligent decisions and inferences made on the based on the meaning of the data (Belfiore, Abstract section).

**Claim 7**, Belfiore does not teach, but Aone teaches

*populating fields of a form selected from a set of forms based on the type of event with the data from the unstructured text (ie., table 3 shows the system recall. Once those event types are stored in the event ontology, they can be recalled upon future extractions)(section 3).*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Belfiore to include storing events in the event ontology for later recall and reuse as taught by Aone, providing the benefit of Natural Language Processing for large-scale relation and event extraction system (Aone, Title, Abstract) and data structure that follow a schema in which the meaning of the communication for intelligent



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*invoking an interface associated with the identified application (ie., user interface supports use of personal device)(para 115).*

**Claim 12.** Belfiore teaches

*Integrating information associated with the event notification with data managed by the identified application (ie., the computer device to understand component ... perform intelligent action locally stored schema ... event notification service ...)(para 18).*

**Claim 13, 45,** Belfiore teaches

*At least one of a calendar application for managing event data associated with a calendar', a task manager for managing event data associated with tasks', an address book for managing event data associated with contact information for entities', and a portfolio manager for managing event data associated with a portfolio. (ie., calendar)(para 73).*

**Claim 14, 46,** Belfiore teaches

*forming an icon reflecting the event (ie., send icon)(para 6), and sending data to the particular device to generate the icon (ie., send icon on a computer display routed over the internet)(para 6).*

**Claim 15, 47,** Belfiore teaches

*forming an audio message reflecting the event (ie., input/output component ... user interface converts text to audio)(para 94); and sending data to the particular device to generate the audio message (ie., audio message)(para 95).*

**Claim 16, 48,** Belfiore teaches

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decisions and inferences made on the based on the meaning of the data (Belfiore, Abstract section).

**Claim 8, 41**, Belfiore teaches

*transmitting the notification of the event to the particular device (ie., content of message transmitted from host to a client device 110, fig 1 of events 155 over 190).*

**Claim 10**, Belfiore does not teach, but Aone teaches

*sending at least one of*

*(i) the form, (ix) a summary of the unstructured text, and*

*(x) the form and a summary of the unstructured text (ie., template goes back and forth between REES and the user GUI, through the template tool)(fig 3, sec 2).*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Belfiore to include a template processing system between a server and user GUI with processing from the template tool as taught by Aone, providing the benefit of Natural Language Processing for large-scale relation and event extraction system (Aone, Title, Abstract) and data structure that follow a schema in which the meaning of the communication for intelligent decisions and inferences made on the based on the meaning of the data (Belfiore, Abstract section).

**Claim 11, 44** Belfiore teaches

*identifying an application from the set of applications executable by the*

*particular device based on the type of event (ie., based on a set of observed events or stored events transferred into action)(para 121-122); and*

*forming a visual message reflecting the event (ie., typed email message displayed visually on text based email displayed through video); and*  
*sending data to the particular device to generate the visual message (ie., where message displayed through video on client PC, which is sent from the server across the communications link)(para 94).*

**Claim 35**, Belfiore teaches

*receiving at the central controller content addressed to a particular device (address of web page requested by user to destination that is processed through the server)(paragraph 7);*  
*generating a form containing data extracted from the content (ie., creating ad hoc templates ... Template generation)(para 113) and*  
*making available to the particular device a notification of the event (ie., event notification service that passes messages to device)(para 18).*

Belfiore does not teach, but Aone teaches

*typing at least one event reflected by the content (ie., event extraction system, fig 2 shows ATTACK target event template for a sentence)(section 1).*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Belfiore to include an event extraction system that generates a template for events as taught by Aone, providing the benefit of Natural Language Processing for large-scale relation and event extraction system (Aone, Title, Abstract) and data structure that follow a schema in which the meaning of the communication for intelligent

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decisions and inferences made on the based on the meaning of the data (Belfiore, Abstract section).

**Claim 36**, Belfiore teaches

*a processor (ie., server 120)(para 47); and*

*a memory storing instructions executable by the processor to*

*receive content addressed to a particular device (address of web page requested by user to destination that is processed through the server)(paragraph 7) ,*

*perform to generate a message in a data representation language containing data reflecting an event extracted from the content (ie., creating ad hoc templates ...*

Template generation of the data extracted from the base text)(para 113) , and

*make the message available to the particular device (ie., event notification service that passes messages to device)(para 18);*

Belfiore does not teach, but Aone teaches

*extraction process (ie., event extraction system, fig 2 shows ATTACK target event template for a sentence)(section 1).*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Belfiore to include an event extraction system that generates a template for events as taught by Aone, providing the benefit of Natural Language Processing for large-scale relation and event extraction system (Aone, Title, Abstract) and data structure that follow a schema in which the meaning of the communication for intelligent decisions and inferences made on the based on the meaning of the data (Belfiore, Abstract section).

**Claim 38**, Belfiore teaches

*A processor (ie., server 120)(para 47); and*  
*a memory (ie., storage, ... memory)(para 22) containing instructions executable by the processor to*  
*receive content including unstructured text addressed to a particular*  
*device (address of web page requested by user to destination that is processed through the server)(paragraph 7);,*  
*generate a form containing data extracted from the unstructured text (ie., creating ad hoc templates ... Template generation)(para 113) ,*  
*and make available to the particular device a notification of the event (ie., event notification service that passes messages to device)(para 18) .*  
*type at least one event reflected by the unstructured text (ie., fig 2 shows event in sentence is identified as Type: conflict).*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Belfiore to include events as templates for natural sentences where a type is matched to the sentence and identifies the type of the event as taught by Aone, providing the benefit of Natural Language Processing for large-scale relation and event extraction system (Aone, Title, Abstract) and data structure that follow a schema in which the meaning of the communication for intelligent decisions and inferences made on the based on the meaning of the data (Belfiore, Abstract section),.

**Claim 39**, Belfiore does not teach, but Aone teaches

*identifies the event in the unstructured text (ie., identifying the words in the sentence provided to the system)(fig 2)', and*

*identifies an event type for the event based on stored information reflecting event types (ie., fig 2 shows event in sentence is identified as Type: conflict).*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Belfiore to include events as templates for natural sentences where a type is matched to the sentence and identifies the type of the event as taught by Aone, providing the benefit of Natural Language Processing for large-scale relation and event extraction system (Aone, Title, Abstract) and data structure that follow a schema in which the meaning of the communication for intelligent decisions and inferences made on the based on the meaning of the data (Belfiore, Abstract section).

**Claim 40**, Belfiore does not expressly teach, but Aone teaches

*populates fields of a form selected from a set of forms based on the type of event with the data from the unstructured text (ie., fig 2 shows matching the sentences with the data types WEAPON – missiles).*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Belfiore to include events as templates for natural sentences where a type is matched to the sentence and identifies the type of the event as taught by Aone, providing the benefit of Natural Language Processing for large-scale relation and event extraction system (Aone, Title, Abstract) and data structure that follow a schema in which the meaning of the communication for intelligent decisions and inferences made on the based on the meaning of the data (Belfiore, Abstract section).

**Claim 54**, Belfiore teaches

*A processor (ie., server 120)(para 47); and*  
*a memory (ie., storage, ... memory)(para 22) for storing instructions executable by the processor to*  
*storing for a client including unstructured text (address of web page requested by user to destination that is processed through the server)(paragraph 7);,*  
*generate a form in a data representation language including data extracted from the content (ie., creating ad hoc templates ... Template generation)(para 113) ,*  
*and transmitting to the client a notification including the form (ie., event notification service that passes messages to device)(para 18) .*

**Claim 55**, Belfiore does not expressly teach, but Aone teaches

*populating fields of at least one stored template (ie., fig 2 shows matching the sentences with the data types WEAPON – missiles), and*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Belfiore to include events as templates for natural sentences where a type is matched to the sentence and identifies the type of the event as taught by Aone, providing the benefit of Natural Language Processing for large-scale relation and event extraction system (Aone, Title, Abstract) and data structure that follow a schema in which the meaning of the communication for intelligent decisions and inferences made on the based on the meaning of the data (Belfiore, Abstract section).

**Claim 56**, Belfiore teaches

*Sending an instruction to prompt a user to cause the client to perform an operation on data in at least one field of the template (ie., data in stored schema, upon user properly authenticates, user can update information in the scheme)(para 19).*

**Claim 57**, Belfiore teaches

*Sending an instruction to invoke a process associated with an application executed on the device to perform an operation on data in at least one field of the template (ie., server sends event notification for schema update service, also, server sends instructions to client to display results or event information)(para 18,19).*

**2-2) Claims 3, 9, 37, 42, 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belfiore et al (as cited above), in view of Aone (as cited above) further in view of Liddy et al (US 6026388, issued Feb 2000).**

**Claim 3, 37, 64**, Belfiore teaches

*(d) filling fields of templates with corresponding information from (ie., fill in fields of template)(para 50).*

Belfiore does not teach but Aone teaches

*the content based on a result of the application of the pattern sets to the logical hierarchical tree, reflecting the linking of any anaphoric expression to its referent, in the content (ie., event merging – merging coreferring event into a single event)(section 2.3.2),*

*(b) applying to the logical hierarchical tree extraction pattern sets to recognize and tag proper names and pre-specified events in the content (ie., tagging modules relying on pattern based extraction ... recognizes names)(section 2.2.1);*



*(c) linking any anaphoric expression to its referent, in the content (ie., reference rules applied to selected auophara whose antecedents ...)(section 2.2)', and*

Belfiore in view of Aone does not expressly teach, but Liddy teaches

*(a) tokenizing (col 18, line 5) the content into a logical hierarchical tree representing parts of the content (ie., tree representation of query)(col 19, lines 30) ,*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Belfiore to include event merging, tagging modules relying on pattern based extraction, recognizing names as taught by Aone, providing the benefit of Natural Language Processing for large-scale relation and event extraction system (Aone, Title, Abstract) and data structure that follow a schema in which the meaning of the communication for intelligent decisions and inferences made on the based on the meaning of the data (Belfiore, Abstract section), further to modify Belfiore in view of Aone to include tree representation of queries as taught by Liddy, providing the benefit of a user interface and enhancement for natural language information retrieval (Liddy, Title, Abstract).

**Claim 9, 42,** Belfiore in view of Aone does not expressly teach, but Liddy teaches *prompting a user for a request for at least one of*

*(v) the unstructured text (ie., sign on screen prompts user to sign on. Upon validation the query screen allows user to request a natural language query, which is equivalent to claimed language of unstructured text)(col 28, line 41 – col 24, line 13).*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Belfiore in view of Aone to include prompting a user and then allowing user to

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request a natural language query taught by Liddy, providing the benefit of a user interface and enhancement for natural language information retrieval (Liddy, Title, Abstract).

***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam Sain whose telephone number is 571-272-4096. The examiner can normally be reached on M-F 9-5 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GS

GS

  
SANJIV SHAH  
PRIMARY EXAMINER